

Listing of Claims. This Listing of Claims replaces all prior versions and listings of Claims in the application.

1 1. (Withdrawn) An audible alert device for generating a pulse width
2 modulated
3 signal, the audible alert device connectable to a power source, the audible alert
4 device comprising:
5 a circuit including a pulse width modulated signal generator; and
6 a transducer conductively connected to the circuit.

1 2. (Withdrawn) The audible alert device of Claim 1 further comprising
2 the circuit and the transducer at least partially enclosed within a housing.

1 3. (Withdrawn) The audible alert device of Claim 1 wherein the pulse
2 width modulated signal generator further comprises:
3 a first square wave frequency timer for generating a pulse width modulated
4 signal;
5 a second square wave frequency timer for generating a square wave; and
6 a duty cycle controller for controlling a decibel output level of the transducer.

1 4. (Withdrawn) The audible alert device of Claim 1 wherein the circuit
2 further comprises a feedback signal processor conductively connected to the pulse
3 width modulated signal generator.

1 5. (Withdrawn) The audible alert device of Claim 1 further comprising:
2 an output current sensor conductively connected to the transducer, for
3 sensing a resistance at the transducer and generating a signal representative of
4 transducer output current level;
5 a feedback signal processor including;

6 a feedback signal generator conductively connected to the output current
7 sensor for generating a signal representative of transducer output current level; and
8 a resonant frequency peaking circuit for processing the signal representative
9 of transducer output current level and generating a feedback signal representative of
10 transducer output current level, the pulse width modulated signal generator
11 responsive to the feedback signal to generate a pulse width modulated signal at a
12 resonant frequency.

1 6. (Withdrawn) The audible alert device of Claim 1 further comprising:
2 an output current sensor conductively connected to the transducer, for
3 sensing a resistance at the transducer and generating an analog signal
4 representative of transducer output current level;
5 a feedback signal processor including;
6 a feedback signal generator conductively connected to the output current
7 sensor, the feedback signal generator including an analog to digital converter for
8 converting the analog signal representative of transducer output current level to a
9 digital value representative of transducer output current level; and
10 a resonant frequency peaking circuit conductively connected to the pulse
11 width modulated signal generator for processing the digital value representative of
12 transducer output power level and generating a feedback signal representative of
13 transducer output current level, the pulse width modulated signal generator
14 responsive to the feedback signal to generate a pulse width modulated signal at a
15 resonant frequency.

1 7. (Withdrawn) An audible alert device for generating a pulse width
2 modulated
3 signal, the audible alert device connectable to a power source, the audible alert
4 device comprising:
5 a transducer;
6 a circuit including a power conditioning circuit conductively connected to the
7 transducer; and

8 a pulse width modulated signal generator conductively connected to the
9 transducer, the pulse width modulated signal generator including a first square wave
10 frequency timer for generating a pulse width modulated signal, a second square
11 wave frequency timer for generating a square wave and a duty cycle controller for
12 controlling a decibel output level of the transducer.

1 8. (Withdrawn) The audible alert device of Claim 7 further
2 comprising the circuit and the transducer at least partially enclosed within a housing.

1 9. (Withdrawn) The audible alert device of Claim 7 further
2 comprising:

3 an output current sensor conductively connected to the transducer, for
4 sensing a resistance at the transducer and generating a signal representative of
5 transducer output current level;

6 a feedback signal processor including;

7 a feedback signal generator conductively connected to the output current
8 sensor for generating a signal representative of transducer output current level; and
9 a resonant frequency peaking circuit for processing the signal representative of
10 transducer output current level and generating a feedback signal representative of
11 transducer output current level, the pulse width modulated signal generator
12 responsive to the feedback signal to generate a pulse width modulated signal at a
13 resonant frequency.

1 10. (Withdrawn) The audible alert device of Claim 7 further comprising:

2 an output current sensor conductively connected to the transducer, for
3 sensing a resistance at the transducer and generating an analog signal
4 representative of transducer output current level;

5 a feedback signal processor including;

6 a feedback signal generator conductively connected to the output current
7 sensor, the feedback signal generator including an analog to digital converter for

8 converting the analog signal representative of transducer output current level to a
9 digital value representative of transducer output current level; and

10 a resonant frequency peaking circuit conductively connected to the pulse
11 width modulated signal generator for processing the digital value representative of
12 transducer output power level and generating a feedback signal representative of
13 transducer output current level, the pulse width modulated signal generator
14 responsive to the feedback signal to generate a pulse width modulated signal at a
15 resonant frequency.

1 11. (Original) A method for manufacturing an audible alert device
2 includes the steps of:

3 manufacturing a programmable audible alert device circuit including a
4 memory device;

5 connecting the programmable audible alert device circuit to a transducer;

6 installing the programmable audible alert device circuit and transducer in a
7 housing;

8 casting the programmable audible alert device circuit in a sealing fluid;

9 connecting the audible alert device to a device programming station; and

10 programming the audible alert device.

1 12. (Original) The method for manufacturing an audible alert device of
2 Claim 11 wherein the step of manufacturing a programmable audible alert device
3 circuit includes manufacturing a circuit including a pulse width modulated signal
4 generator conductively connected to the transducer, a power conditioning circuit
5 conductively connected to the pulse width modulated signal generator, a power
6 conductor, conductively connected to the power conditioning circuit, an output
7 current sensor conductively connected to the transducer, a feedback signal
8 processor connected to the output current sensor and a memory device conductively
9 connected to the feedback signal processor.

1 13. (Original) The method for manufacturing an audible alert device of
2 Claim 11 wherein the step of connecting the audible alert device to a device
3 programming station includes connecting the audible alert device to the device
4 programming station by one or more power conductors of the programmable audible
5 alert device.

1 14. (Original) The method for manufacturing an audible alert device of
2 Claim 11 wherein the step of programming the audible alert device includes
3 transferring operation mode data to the memory device, the operation mode data
4 representative of pre-selected operation mode data selected from a group data for
5 operating audible alert devices.

1 15. (Original) The method for manufacturing an audible alert device of
2 Claim 11 wherein the step of programming the audible alert device includes
3 transferring resonant peaking subroutine data to the memory device.

1 16. (Original) The method for manufacturing an audible alert device of
2 Claim 11 wherein the step of programming the audible alert device includes
3 transferring decibel peaking subroutine data to the memory device.

1 17. (Original) The method for manufacturing an audible alert device of
2 Claim 11 wherein the step of programming the audible alert device includes
3 conducting a resonant peaking subroutine.

1 18. (Original) The method for manufacturing an audible alert device of
2 Claim 11 wherein the step of programming the audible alert device includes
3 conducting a decibel peaking subroutine.

1 19. (Original) A method for operation of an audible alert device in a
2 normal operations mode includes the steps of:

3 powering the audible alert device;
4 monitoring an output current;
5 conducting a dynamic resonant frequency peaking subroutine;
6 conducting a dynamic decibel peaking subroutine ;
7 initiating generation of a pulse width modulated signal; and
8 outputting the pulse width modulated signal at a transducer.